



PREVENTIVE AND EDUCATIONAL MEASURES THAT CAN BE IMPLEMENTED TO REDUCE ORAL HEALTH DISPARITIES IN THE UNITED STATES: A LITERATURE REVIEW

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ABSTRACT

Oral health is a crucial element of health, as it not only accounts for healthy tooth conditions but also overall health. Currently, oral health diseases are one of the most prominent non-communicable diseases in the world, and this problem is especially apparent in underserved, low-income populations. Therefore, initiatives must be implemented to change social and public health policies regarding oral health, resource allocation, and both individual and professional behaviors toward oral health. Enhancing dental schools' instruction on inclusivity and accessibility in dental care is one of these initiatives. Furthermore, policymakers should consider fully expanding Medicaid in all states, providing coverage for dental care for all, if not many, residents of the United States. Additionally, expectant women should receive adequate education on maintaining good oral hygiene to prevent the further spread of oral diseases. This research paper explores the three initiatives—education in dental schools, expansion of Medicaid, and adequate parental education in oral health—in detail and provides potential solutions to ameliorate conditions in dental health disparities.

KEYWORDS: Oral Health, Disparities, Underserved Populations, Education, Medicaid

INTRODUCTION

Indisputably, oral health is a crucial aspect of overall health. Healthy tooth conditions are not the sole indication of oral health. Rather, the mouth serves both as a reflection and a cause of the individual and population's well-being and health. Maintaining good oral health can contribute to the mental, social, and physical well-being of individuals. Hence, early oral disease prevention is imperative to not only ensure adequate oral health but also health in general. Currently, among the most prominent non-communicable diseases worldwide is oral disease, and this is especially accentuated in low-income populations. According to the WHO Global Oral Health Status Report (2022), the most prevalent disease is dental cavities that are left untreated, leaving over 530 million children affected.

Although many oral health diseases are preventable, discrepancies in treatment result from socioeconomic inequalities that lead to a lack of access to health care. Oral health disparities that result from socioeconomic inequalities range from 35% in low-income populations to 82% in high-income populations. Underserved groups, along with other socially underrepresented groups, such as those with disabilities or other special health conditions, will comprise the majority of the population that will require dental care in the future. Despite the cost burden of implementing dental health education-related programs, the mitigatory benefits outweigh such costs, meaning that it would be beneficial for countries to provide enhanced dental education. Therefore, to improve access to dental care and prevent the exacerbation of oral diseases, initiatives must be implemented to change the social and public health policy regarding oral health, resource allocation, and both individual and professional behaviors toward oral health.

METHODOLOGY

This research paper adopts a literature review approach, employing secondary qualitative sources to comprehensively examine and analyze various studies assessing the efficacy of oral health mitigatory programs in economically disadvantaged

communities. This methodology was chosen due to the need to synthesize existing research findings, provide a nuanced understanding of the subject, and offer insights into the practical implications and potential gaps in the current knowledge base. By collating and analyzing diverse studies, this approach ensures a holistic perspective on the complex interplay between oral health interventions and socio-economic factors.

RESULTS

Enhancing the Current Dental Education System

Only 55.2% of the alumni and 71.3% of current students at the University of Michigan's Ann Arbor Dental School reported having received sufficient education to treat patients of different ethnicities, according to a study by Smith et al. (2006) that surveyed 328 current dental students and 234 alumni. Furthermore, out of 38% of the alumni, a sole 67.4% suggested that the education received in dental school prepared them to face patients of different socioeconomic backgrounds and provide inclusive treatment. Such findings evince a positive correlation between the degree to which the curriculum emphasizes the value of treating patients from all sectors of society, including diverse socioeconomic backgrounds, as well as the goals of students and graduates to offer inclusive patient care to patients from all backgrounds. Students were more likely to declare that they intended to treat patients from various ethnic groups the more often they agreed that their dental education had adequately prepared them to do so. Similarly, the relationship is clear: alumni are more likely to provide treatment to patients of diverse socioeconomic backgrounds the more they agree that their education has adequately prepared them to provide inclusive dental care. Hence, these findings indicate that if dental students receive more overt education about inclusive treatment in dental care, there could be a potential increase in inclusive oral health care and access to dental care for underrepresented populations. Research has indicated that dental education significantly influences the professional behaviors and attitudes of current and prospective dental practitioners toward underserved populations. Therefore, a key objective of dental education in universities must be to

acknowledge and recognize the unique needs of patients and make sure that future practitioners are best equipped to handle these issues.

Medicaid

Medicaid is a federal-state financial partnership program that offers health insurance to qualified low-income adults, children, pregnant women, elderly adults, and people with disabilities in the United States. According to federal regulations, states are responsible for managing Medicaid, and state Medicaid programs ought to ensure that children are enrolled in comprehensive Medicaid dental coverage. However, the majority of low-income adults do not have coverage for public dental insurance, as state governments are not mandated to offer dental coverage to adults who enroll. Hence, oral health coverage varies widely from one state to another. Currently, 41 out of 50 states in the USA have adapted and implemented the expansion of Medicaid. Meanwhile, 15 states either do not provide any coverage or simply provide emergency coverage for dental care (Elani et al., 2020). Additionally, approximately 74 million Americans lack access to dental care and coverage, which is double the number of those, representing about a quarter of the entire population (Green, 2023). Indeed, in the state of Illinois, it is estimated that over a third of the adolescent population has untreated dental caries in rural areas. Moreover, the 2016 report of Oral Health in Illinois reports that only about half (55%) of the children enrolled on Medicaid had the chance to see the dentist, which reveals a discrepancy in access and affordability to health care.

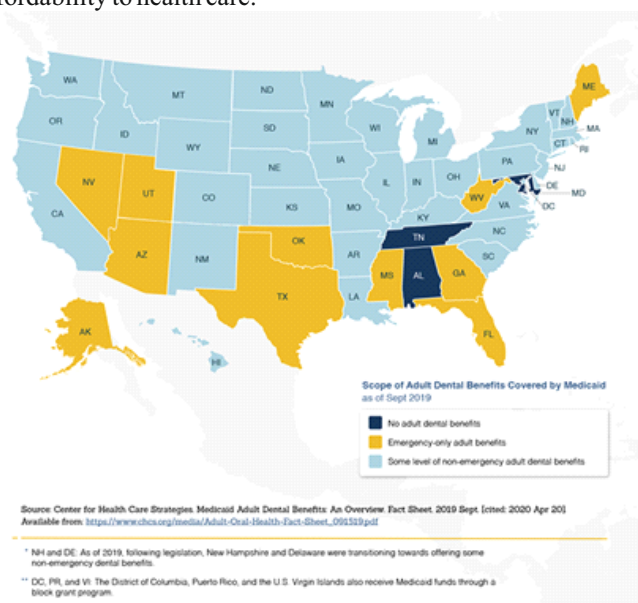


Figure 1: Map of Scope of Adult Dental Benefits Covered by Medicaid as of September 2019

Source: U.S. Department of Health and Human Services (2023)

According to a cross-sectional study by Elani et al. (2020), there is an apparent association between coverage of adult dental incentives and Medicaid expansion and a generally improved oral health status among underserved populations. These findings indicate that Medicaid expansion improves clinical indices of oral health as well as coverage and access to dental care. The expansion of Medicaid is essential to all states in that it lowers the cost of insurance or expands the extent of care, yielding significant changes in dental care usage and accessibility to dental care for underserved populations in the United States. Hence, policymakers in the United States should consider implementing the expansion of Medicaid in all states in

the USA, as doing so will enhance the overall oral health of the country and will therefore lead to the well-being of individuals. Alongside the expansion of Medicaid in all states, policymakers should also consider expanding the coverage of Medicaid in dental care, as there is a significant divide between dental and medical insurance coverage.

Role Parents Play on Oral Health

Research evinces the importance of parents having adequate knowledge and understanding regarding the maintenance of good oral hygiene, especially because pregnant women are more vulnerable to decrepit oral health conditions (Javali, 2022). Furthermore, there is a strong association between socioeconomic status, along with the level of education, and behaviors in approaching oral health and practice. According to a cross-sectional study by Wassihun et al. (2022), pregnant women from rural groups lacked knowledge about the connection between poor oral health and unfavorable pregnancies. Insufficient education or knowledge about maintaining healthy oral hygiene can result in adverse complications, which include preterm and low birth weight deliveries. Moreover, this lack of knowledge may also lead to increased risks of developmental dental defects and caries for infants and even the unborn child. The goal of the oral health education initiative is to increase mothers' access to information on proactive advice during pregnancy. Mothers need to get enough first-hand dental education since they play a significant role in instilling in their child's positive attitudes, knowledge, and awareness. Receiving adequate oral health education during pregnancy can ameliorate oral health conditions and therefore enhance pregnancy outcomes (Gambhir, 2015). Thus, parental education regarding oral health can play a significant role in reducing oral diseases, meaning that policymakers should consider implementing educational programs about oral health and hygiene for aspiring or expectant mothers.

Counterargument/Rebuttal

Some express doubt regarding the costs required upon the implementation of programs such as Medicaid, as several states are beginning to consider cuts to their Medicaid programs due to the severe budget deficits resulting from the COVID-19-related economic crisis. However, such actions would seriously limit access to patients in need of care in the case that providers are unable to continue issuing the same level of services as Medicaid. According to the White House, if Medicaid is successfully repealed by the Republicans, up to 24 million Americans will lose protection against catastrophic medical bills, and there will be an average increase of over \$1000 in medical debt for millions covered through Medicaid expansion. Aside from the costs raised by repealing Medicaid, there are more negatives that make Medicaid an essential incentive for the federal government to implement in the states. A major example is the financial burden imposed on US residents. Financial limitations prevent people from receiving timely dental care, as more than half of Americans cannot afford it. Indeed, over 80% of Americans today delay dental care, knowing that it will cost them more in the long term. Hence, despite the concerns that arise from the burden upon the federal government in funding the states with Medicaid, repealing such incentives will result in an outcome that is incomparably worse than the current situation, as millions of Americans will be held back with the accessibility to oral health care.

DISCUSSION

This review explores the effect of oral health education programs on ameliorating existing disparities among the US population. Several academic studies provided comprehensive

data on the ratings of experimental groups on the effectiveness of receiving enhancement programs in the form of parental education, improving the current dental education system to be more inclusive, raising awareness of equity, and national programs such as Medicaid. In this research, finding an abundant number of relevant studies with similar subjects of interest and common data was the main impediment to completing the analysis. To meet this need, a literature review was selected as the ideal method of investigation, which coalesces independent studies and does so by providing a summary of each rather than statistically combining the data. Merit was found in that there was much more room for interpretation, and it was estimated to be a more manageable way of conducting research. Having reviewed an abundant number of sources, I was able to deduce major similarities across those studies and recognize them as the conclusive prognostic significance of each program. All of the studies concurred on the fact that implementing and expanding oral health programs has a positive effect on reducing and ameliorating oral health disparities.

A limitation of this research is that the study focused solely on the United States population; this served as a disadvantage in certain aspects, as many studies that would have been extremely useful otherwise had to be discarded. The biggest eliminating factor was that there were numerous studies conducted on the effectiveness of oral health education programs in other countries, such as African countries or other underdeveloped nations. However, due to my topic of interest being focused on the extent to which oral health education programs should be implemented in the United States, the inclusion of studies concentrated on other nations made it difficult to extract relevant data. Hence, because this study preliminarily focused on oral health education in the United States, a few studies that failed to acknowledge the US audience were not included.

Lastly, relating to the previous point on the impediments encountered due to the specificity of the topic, another major issue was that many studies focus on general health disparities, not oral health. Therefore, finding adequate information concerning the topic was difficult, which decreased the generalizability of the information extracted from the sources to the general population, as some may remain somewhat ambiguous.

CONCLUSION

Several changes can be made to the current situation in the United States to mitigate oral health disparities. First, policymakers should consider implementing initiatives such as Medicaid in all US states to enhance the scope of coverage in dental care. Additionally, universities should provide more education regarding oral disparities in their dental programs to address such issues and provide more inclusive and equitable dental care to all. Finally, parents should have a comprehensive understanding of the importance of maintaining dental care, and to do so, educational programs can be implemented in low-income populations.

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